Video Stream Analyzer (VSA)
An Integral Part of the Viavi Solutions™ Video Monitoring Solution
The VSA Solution

The VSA combines Viavi digital video-monitoring software with commercially available, off-the-shelf hardware to create an easily-maintained, upgradeable video probe. Specifically developed for video service providers who must ensure quality of service (QoS) and quality of experience (QoE), VSA is a highly cost-effective and scalable solution that unites a system-integrated monitoring probe with all the features of a standalone digital video analyzer. This ensures monitoring results are consistent with troubleshooting information, enabling a seamless transfer of information to Tier 2 and 3 groups and preventing repeat investigations with different tools.

Key Benefits

- Robust video-stream monitoring reduces subscriber complaints and decreases MTTR
- Loudness monitoring ensures compliance with local regulations, avoiding fines while reducing trouble tickets
- An integrated video analyzer enables seamless problem escalation across workgroups, decreasing MTTR
- Dense multi-port support decreases per-port analysis and deployment costs
- Integration (via a powerful API and an open platform) with in-house systems streamlines processes

Applications

- Video monitoring and troubleshooting for IPTV, cable, and satellite service providers
- 24x7 audio loudness monitoring
- 24x7 video stream QoS/QoE monitoring
- Segmentation using probes distributed from ingest headends to the network edge
- Remote, real-time analysis

Loudness Monitoring

The VSA monitors audio levels of AC-3 audio and the associated dialnorm to pinpoint excessively loud sections of programming. The VSA will generate alarms and notifications based upon configured thresholds, alerting operators to the presence of perceived audio loudness issues. Developed to address the issue of excessive audio loudness during commercial advertisements, proactive notification reduces customer calls, saving the time and effort of responding to complaints and saving money by averting fines (for example, CALM legislation in North America) through the early detection of issues and documented proof of compliance.

SimulTrak™ Monitoring

SimulTrak lets users monitor MPEG digital video with a breadth, depth, and accuracy never before available. The simultaneous monitoring does not rely on any scanning techniques, giving an uninterrupted view of transport-stream QoS. The highly-accurate timing measurements and PID rate monitoring give a constant reflection of QoE as they use the same algorithms as the integrated MPEG analyzer.
**Actionable Information, Not a Sea of Data**

The ability to customize monitoring profiles based on program source and content is vital to ensure the usefulness of the monitoring system. For example, VSA supports unique monitoring profiles for high definition (HD) content, standard definition (SD) content, as well as international and local programming. It also enables customizing thresholds for each program and for each monitoring point in the network to avoid alarms on programs not controlled by the service provider.

The VSA provides the following event-threshold capabilities:

- Unique monitoring profiles for over 40 measurements
- Multiple levels of threshold violation: warning, minor, major, and critical
- User-definable violation levels for each item monitored that generates an event

A web-based configuration tool lets users create, store, and distribute configurations to probes. This tool supports a user-defined grouping of units and interfaces along with status indicators. The VSA configuration tool enables easy distribution of changes such as channel lineups and event thresholds to probes throughout the network.

The flexibility of the VSA lets users define the method used to join transport streams for monitoring. Users may choose to employ Internet group management protocol (IGMP) from the VSA to actively join transport streams or connect to the network using passive methods such as SPAN ports or network TAPs.

**Troubleshooting Analysis**

When needed, users can access a detailed analysis and troubleshooting mode. This gives users the ability to remotely isolate problems and troubleshoot specific issues. Analysis of tables and metadata, PID-based utilization graphs, PCR timing graphs, and much more lets local experts troubleshoot issues remotely, preventing costly dispatches.

The troubleshooting mode has no impact on monitoring functions such as SimulTrak or loudness, eliminating the need for users to choose between monitoring functions and troubleshooting analysis.

Real-time loudness displays show the severity of loud sections and can be used to verify the resolution of issues as well. Historical data confirms or refutes reported violations and reveals the affected content when violations are found, enabling operators to understand the origin of an issue. For example, does the problem occur during an ad inserted by the operator or was this content passed through from the content provider?

**Scalability**

Multiple VSA units can be deployed in a system environment for monitoring at key points in the network. This scalability lets providers leverage their initial investment as needs grow and evolve from a few units to a large, centralized monitoring system with full analysis capabilities. In addition, operators can size the hardware for future expansion, enabling field upgrades for additional monitoring and troubleshooting capacity.
API
Integration of the VSA can enhance monitoring systems for many users.
Viavi provides an open, XML-based API for complete integration of monitoring functionality. The API lets the VSA integrate with third-party monitoring/OSS platforms from vendors like Miranda®, SkyLine®, and Cisco® as well as with custom, in-house solutions. In addition, a SNMP trap-generation feature provides alternate ways to integrate VSA with additional systems.

Related Products
Viavi PathTrak Video Monitoring (PVM) Software helps segment video problems in minutes, not hours, by proactively monitoring across RF and Ethernet test points. PVM supports RSAM, MVP200, and VSA probes, providing a centralized access point and a common, intuitive GUI for users to see current network status, alarms, events, and historical data.

For more information please call your local Viavi representative.